

to examine Fischer's type specimen which came from Herb. Pallas and probably served for Pallas' drawing. At the same time I looked over all the material of *P. suaveolens* in the herbaria of the Botanic Garden and of the Academy of Sciences and came to the conclusion, that the two plants are quite different and that typical *P. suaveolens* does not occur in China at all, but is restricted to the region north of the Mongolian desert, while the Chinese plant is a new species described above as *P. cathayana*. This species occurs throughout northern China and ranges from western Szechuan and Kansu to Chili and Manchuria and possibly to Korea, if Jack's specimen from Ping yang belong here which is somewhat doubtful. *Populus cathayana* is more closely related to *P. Simonii* Carr., *P. Purdomii* Rehd. and *P. szechuanica* Schneid. than to *P. suaveolens* Fisch. which is easily distinguished by its oval or elliptic to elliptic-oblong leaves, generally broadest about the middle, abruptly acuminate at the apex with a very short often twisted acumen, with often slightly impressed veinlets above and usually slightly pilose beneath near base, and by its shorter petioles 0.5–3 cm. long, generally not longer than $\frac{1}{4}$ the length of the blade, and often slightly pilose. *Populus Purdomii* differs in its larger leaves, with somewhat coarser and not appressed serration usually short-pilose chiefly on the veins beneath and in the 2-valved capsules. In the size and shape of its leaves *P. cathayana* holds about the middle between *P. Simonii* which occupies nearly the same range and *P. szechuanica* which is known only from Szechuan and seems of restricted distribution. The latter differs from *P. cathayana* chiefly in the much larger broadly ovate leaves measuring on fruiting branches 10–20 cm. in length and 8–15 cm. in width with broad rounded or subcordate base and in the sharply angled vegetative shoots, while *P. Simonii* differs in its smaller leaves, usually 4–8 cm. long and broadest near the middle with broadly cuneate base, in the shorter 1–2.5 cm. long petioles, in the more or less angled vegetative shoots with short-petioled usually obovate leaves and in the slenderer catkins with smaller mostly 2-valved fruit. Of the specimens cited above Wilson's nos. 1413 and 2165 and Ching's no. 482 resemble somewhat *P. szechuanica* to which these Wilson numbers had been referred by Schneider besides nos. 4346, 4348 and 4361. I now restrict *P. szechuanica* to Wilson's nos. 2163 (type), 1434 and 4355. Wilson's Veitch Exped. no. 4529, Schneider's no. 843 and Sargent's specimen from Harbin approach *P. Simonii*.

One of the reasons why this Chinese species has been confused by many recent authors with *P. suaveolens* Fisch., is probably the absence or scarcity of material of the true species in the herbaria

of western Europe and of America; also in the herbarium of this institution the true *P. suaveolens* was not represented until I brought several duplicates from Leningrad two years ago. To which species the specimens from Songaria and Turkestan referred by several authors to *P. suaveolens* belong, I am not prepared to say, as I have not studied the Poplars of those regions.

***Populus cathayana* var. *Schneideri*, var. nov.**

A typo recedit folii venis supra et subtus minute puberulis, petioles et ramulis gemmisque densius et minute puberulis, rhachi amenti fructiferi et capsulis breviter pilosis.—Folia ovata, 6–9 cm. longa et 4–6.5 cm. lata, basi rotundata, serraturis parvis adpressis interdum fera obsolete, supra opace flavo-viridia, venis et petiolis flavescentibus; amenta fructifera circiter 8 cm. longa.

CHINA. Y u n n a n : Yung ning, *C. Schneider*, no. 1611, June 20, 1914 (large tree, bark as in *P. tremula*).

In all its other characters except in the fine pubescence of the branchlets, winter-buds and veins of the leaves and in the pilose capsules this specimen agrees well with typical *P. cathayana* as represented by Wilson's nos. 1432, 2164 and 4348, but the leaves show not the slightest tendency toward a subcordate base and the serration is less distinct. It is the most southern specimen of *P. cathayana* I have seen, but though Yung ning is in Yunnan it is situated close to the Szechuan border.

***Populus Simonii* Carrière in Rev. Hort. 1867, p. 360—Wesmael in De Candolle, Prodr. xvi. pt. II. 330 (1868); in Mém. Soc. Sci. Hainaut, III. 247 (Monog. Peupliers, 67) (1869).—Maximowicz in Bull. Soc. Nat. Moscou, LIV. 52 (1879).—Kanitz in Szechenyi, Keletasz. Utján. Tudom. Eret. II. 841 (Pl. Enum. 58) (1891); in Szechenyi, Wissensch. Ergeb. Reise Ostas. II. 732 (1898).—Dippel, Handb. Laubholzk. II. 211, fig. 105 (1892).—Komarov in Act. Hort. Petrop. XXII. 746 (1904).—Schneider, Ill. Handb. Laubholzk. I. 16, fig. 6, o–q (1904); in Sargent, Pl. Wilson. III. 21 (1917).—Dode in Mém. Soc. Hist. Nat. Autun, XVIII. (Extr. Monog. Inéd. Populus, 58, t. 12, fig. 90) (1905).—Gombocz in Math. Termesz. Közl. xxx. 105 (Monog. Gen. Populi) (1908).—Henry in Elwes & Henry, Trees Gr. Brit. & Irel. VII. 1839, t. 410, fig. 28 (1913).—Rehder in Jour. Arnold Arb. IV. 134 (1923); Man. Cult. Trees & Shrubs, 88 (1927).—Handel-Mazzetti, Symb. Sin. VII. 58 (1930).**

Populus suaveolens var. a. Maximowicz in Bull. Soc. Nat. Moscou, LIV. 51 (1879).

Populus Przewalskii Maximowicz in Mém. Biol. XI. 321 (1881); in Bull. Acad. St. Pétersb. XXVII. 540 (1882).—Gombocz in Math. Termesz. Közl. xxx. 101 (Monog. Gen. Populi) (1908).—**Synon. nov.**

Populus laurifolia γ. *Simoni* Regel, Russ. Dendr. ed. 2, 152 (1883).

Populus balsamifera μ . *Simonii* Wesmael in Bull. Soc. Bot. Belg. xxvi. 378 (1887).—Burkill in Jour. Linn. Soc. xxvi. 536 (1899).

Populus balsamifera var. *laurifolia* Burkill, l. c. 535 (1899), pro parte.—Non Wesmael.

Populus balsamifera var. *suaveolens* Burkill in Jour. Linn. Soc. xxvi. 535 (1899).—Non Loudon.

Populus brevifolia Carrière ex Schneider, Ill. Handb. Laubholz I. 16 (1904), pro synonym.

Populus suaveolens var. a. *angustifolia* Gombocz in Math. Termesz. Közl. xxx. 110 (Monog. Gen. Populi) (1908); vix Regel.

Populus Przewalskii f. *microphylla* Gombocz in Math. Termesz. Közl. xxx. 105 (Monog. Gen. Populi) (1908).

Populus suaveolens Schneider in Sargent, Pl. Wilson III. 18 (1916) pro parte, quoad specimina citata, Tibet, Kansu, Chili et Wilson nos. 2162 and 4577 e Szechuan bor.—Rehder in Jour. Arnold Arb. iv. 135 (1923).—Non Fisch.

Populus suaveolens var. *Przewalskii* Schneider in Sargent, Pl. Wilson. III. 32 (1916), specimine e Mongolia citato et descriptione exceptis.—Rehder in Jour. Arnold Arb. iv. 133 (1923).

EASTERN TIBET: K o k o n o r : *N. M. Przewalski*, 2/14 July 1880 (syntype in herb. Petrop.); ad fl. Tchurmyn, 9–9500 ft., *N. M. Przewalski*, 2/14 May (1880) (herb. Petrop.); Kuen-luen “nördliche Vorberge von Nanshan, Da-tschouan,” 5000 ft., *W. J. Roborowski*, May 10, 1894 (herb. Petrop.).

MONGOLIA. Alashan, Van-usin-uin, *S. S. Tchetyrkin*, no. 444, July 16, 1908 (herb. Petrop.); northern Mongolia, *E. Klementz*, in 189.?.; Ordos, Baga-gol, *G. N. Potanin*, Sept. 12, 1884 (herb. Petrop.); Ordos, *N. M. Przewalski*, Aug. 1871 (herb. Petrop.).

CHINA. K a n s u : ad Hoangho superiorem, *N. M. Przewalski*, 2/14 April 1880 (syntype in herb. Petrop.); without precise locality, *N. M. Przewalski*, 22 Aug./3 Sept. 1872 (syntype in herb. Petrop.); Shan-dan-siang, *P. J. Piasezki*, 22 July/4 Aug. 1875 (syntype in herb. Petrop.), Han-tschou-fu, *P. J. Piasezki* 17/29 July, 1875 (syntype in herb. Petrop.); without precise locality, *P. J. Piasezki*, 26 May/7 June 1875 (herb. Petrop.); oppidum Talachi, 26 Oct. 1884, *G. N. Potanin* (herb. Petrop.); ad fl. Bardun, *G. N. Potanin*, 18 May, 1884 (herb. Petrop.); Hoang-ho, *L. de Loczy*, no. 219, Aug. 1879 (herb. Budapest); Pin-fan, *S. S. Tchetyrkin*, no. 559, July 22, 1909; vicinity of Ningsia, alt. 1750–1850 m., *R. C. Ching*, no. 225, June 4–10, 1923; near Pingfan, alt. 2350–2800 m., *R. C. Ching*, no. 505, July 12/20, 1923; inter Kansu et Thianshan, ante Anssit-schou, *P. J. Piasezki*, 8/20 Aug. 1875 (herb. Petrop.). S z e c h u a n : Min valley, Wen chuan hsien, 4–7000 ft., *E. H. Wilson*, no. 1420, Oct. 1908; Min Valley, Sungpan to Mao chow, alt. 2–3000 m., *E. H. Wilson*, no. 4577, Aug. 27, 1910; Monkong Ting, alt. 2400–3000 m., *E. H. Wilson*, no. 2162, June 28, 1908. Y u n n a n : ad fluv. Landsang-djiang (Mekong) near Wei-hsi, alt. 2300 m., *H. Handel-Mazzetti*, no. 10034, Sept. 17, 1916. H u p e h : Hing shan

hsien, alt. 4000 ft., *E. H. Wilson*, no. 1454, Aug. 5, 1907. S h e n s i : Yen-an-fu, *Wm. Purdom*, no. 351, in 1910; Lungshow, Kuan shan, alt. 2000 m., *J. Hers*, no. 2333, July 3, 1922; Lintung, alt. 350 m., *J. Hers*, no. 3018, Oct. 28, 1924; Tsing Ling, 60 km. south of Sianfu, alt. 1000–1500 m., *J. Hers*, no. 3015, Oct. 20, 1924. S h a n s i : in valle fl. Shaho, *G. N. Potanin*, June 3, 1884 (herb. Petrop.); Tai-yuan-fu plain, Fen ho valley, alt., 800 m., *J. Hers*, no. 2702, Oct. 4, 1923; Wu chai hsien, 2000–3000 m., *Tchuang Kieh*, *Hers* no. 2022, Sept. 7, 1922. C h i l i : Peking, *J. Hers*, nos. 2255, 2256, 2257 and 2259, Oct. 18, 1922; Peking, *W. Y. Hsia*, May 3, 1926; Peking, western hills, *J. Hers*, nos. 2219 and 2227, Oct. 11, 1922; Po hua shan, *J. Hers*, no. 1651, Sept. 9, 1921; near Sun tun ying, *F. N. Meyer*, nos. 974 and 975, May 31, 1913; Huai Lai hsien, Lin shu chwang and Yang kia ping, *J. Hers*, nos. 2073 and 2080, Oct. 3 and 4, 1922; Ta han ling, *J. Hers*, no. 1642, Sept. 7, 1921; Nankow, *J. G. Jack*, Oct. 6, 1905; Kalgar, Methodist compound, *N. H. Cowdry*, no. 1441, June 6, 1921. H o n a n : Neihwang, alt. 100 m., *J. Hers*, no. 2457, Oct. 31, 1922; Min chih, alt. 580 m., *J. Hers*, no. 2523. K i a n g s u : Yas wan (on the Great Canal), *J. Hers*, nos. 624 and 625, May 2, 1921; Nanking, *K. Ling*, no. 7946, May 1925, (tree 50 ft. high, in open places).

MANCHURIA: common north of Harbin, *C. S. Sargent*, Aug. 29, 1903; Harbin, *P. V. Suizev*, Aug. 1905 (herb. Petrop.); near Harbin, *B. Skvortzov*, July 1927.

KOREA. N o r t h H e i a n p r o v . : Wijyu, *T. Nakai*, no. 1952, June 3, 1914; abundant on Yalu river around Shingishu, *E. H. Wilson*, no. 8784, July 16, 1917. S o u t h K a n k y o : Hensan to On-senri, *E. H. Wilson*, no. 9343, Oct. 5, 1917.

Populus Simonii and *P. Przewalski* have been regarded up to the present by all authors as two distinct species, but an examination of the type material in the herbarium of the Botanic Garden at Leningrad convinced me that there is no specific difference between the two. The very characteristic short-petioled, obovate leaves of vegetative shoots of *P. Simonii* are also present on vegetative branches of Piasezki's specimen from Kansu collected May 26/June 7, 1875, and the leaves of mature trees of the Kansu specimens are not different from those of specimens collected near Peking which is the region from which *P. Simonii* was introduced. Fruiting specimens from both regions agree in their slender catkins and small mostly two-valved fruits. Maximowicz knew *P. Simonii* only from the description (see Bull. Soc. Nat. Moscou, LIV. 52) and one can readily understand that he did not identify this species described as having strongly angled branches and short petioled leaves 14–18